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FHWA/IN/JTRP-2006/31

Final Report

INDOT CUSTOMER SERVCE

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August 2006

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INDOT Customer Service

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16. Abstract

This study focuses on the flow of customer complaints to the INDOT central office and districts, their handling within the INDOT system and the customer experienced lead time. The processes were examined based on customer segments, complaint type, and district of origin. Detailed data analyses for specific transactions within the INDOT system were used to document the process. In addition, as per the study advisory committee suggestions, a tracking of transactions flow using a paper system was used to reconcile archived data. Although lead time metrics were developed at both the central office and district level, the lack of data linkage between these units creates the possibility for disparate reporting between the two offices. The data analysis suggests the need for creating some fundamental structuring of the complaint handling process between INDOT central office and the districts.

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Understanding, linking and measuring customer complaint and satisfaction

Report – Phase 1

1. Introduction

1.1. Purpose of this document

The document outlines the findings of the work carried out do so far with INDOT. It also would outline the findings and suggestions to improve the customer service process in INDOT.

1.2. Scope of this document

This document covers the findings of the study and the recommendations on the basis of the data analysis reports.

1.3. Overview

The Global Supply Chain Management Initiative (GSCMI), a center located at the Krannert School of Management at Purdue University's West Lafayette campus, is currently reviewing the INDOT customer service process in accordance with the new initiative of customer focus. The team has reviewed the current INDOT database of 650 customer communications and has interviewed the major customer contact points at INDOT. Based on this preliminary study and data analytics, the team is presenting the findings, initial recommendations and next steps.

1.4. Business Context

For public service organizations, the emphasis has shifted from just the measurement of financial performance and budget control to the management and execution of business strategies. Modern public organizations like INDOT have to focus on several strategic themes, such as meeting citizen needs, improving operational efficiency, and enhancing community safety, while dealing with a broad range of stakeholders. To align the overall mission with customer requirements and day-to-day work is a balancing act that requires a high-quality management system at all levels of INDOT.

1.5. Interviews with the INDOT Customer Contact Points

Four visits were conducted by the team to INDOT location in Indianapolis and interviews were carried out with the INDOT. The following people were interviewed:

Charlene Parrish – Correspondence Coordinator Betty – Receptionist

Sherri Koch

Jill – Head of BITS, IT

Richard – IT

Harry Goodall – Video Conferencing

1.6. Current Process Map at the Center

The interviews led to the conclusion about the following structure for complaint handling at the Central Level

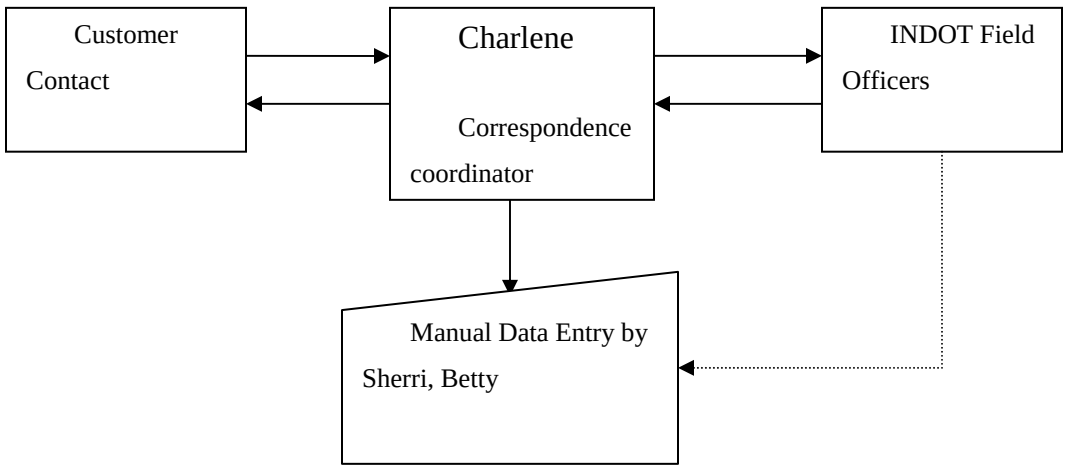


Figure 1 - Current Process Map at the Center

This diagram shows the flow of the current complaint process at INDOT. A customer makes a complaint or comment to INDOT via e-mail. (Customer can also contact INDOT via letters, faxes, phone, and in person.) Charlene Parrish, as the Correspondence Coordinator, acts as the face of INDOT and receives all contacts.

For legitimate complaints, Charlene does the following:

- Assigns the complaint to an INDOT Field Officer.
- Sends customer complaint information for Manual Data Entry.
- Sends an e-mail response to the customer within 48 hours including contact name and phone number of the assigned INDOT Field Officer.

The INDOT Field Officer receives the complaint, handles the complaint in an appropriate manner, and sends feedback to Charlene when the complaint is resolved. Charlene sends this information for Manual Data Entry and the complaint is closed out.

It is also possible for Charlene to receive complaints or comments that are not related to INDOT. She then acts as a filter to direct those complaints to the appropriate contact.

1.7. Data Analysis Results

Communication Type: From a Pareto standpoint, we first looked at the broad breakdown of the communication received at the center by INDOT.

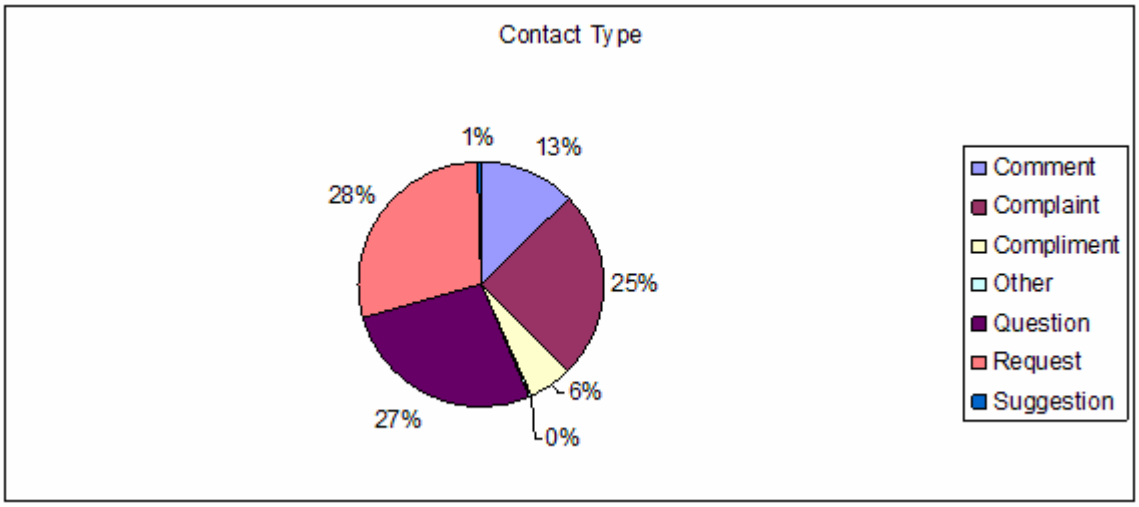


Figure 2 - Type of Contact

This clearly shows that the top three areas of focus from an improvement/further analysis standpoint should be Request, Complaints and Questions together adding up to about 84% of all the communication received by INDOT. To understand the further Categorization used by INDOT, we looked at the subject level categorization and how it matches up with the overall communication.

The following graph explains how the subjects of communication are divided across the major categories. This raises some questions on the subject categorizations that are currently used by INDOT: Why are complaints present in Suggestion, Idea and Suggestion, Repair subjects? Are there areas where the categorizations and subjects are entwined and result in confusion in the understanding of the communication?

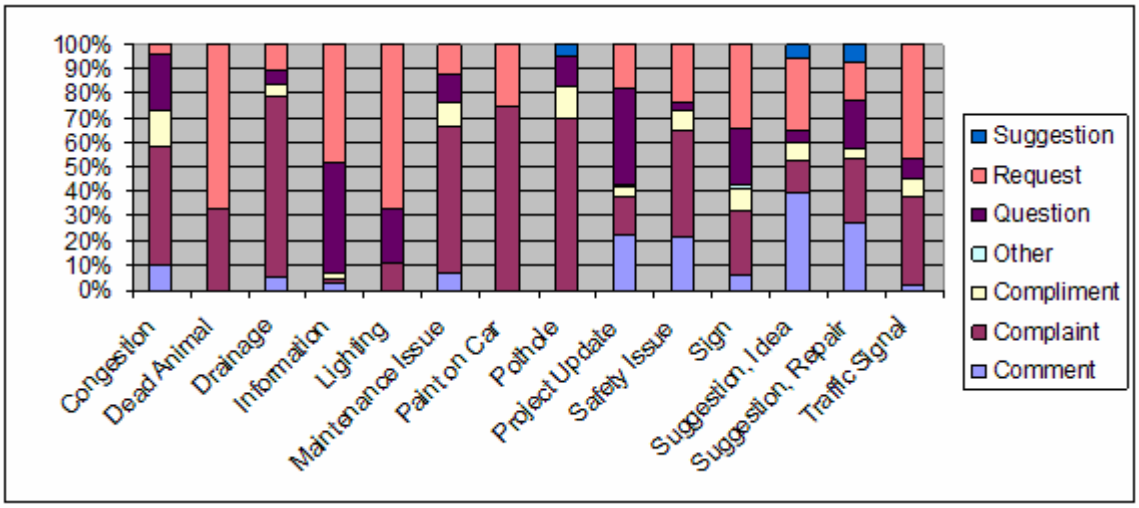


Figure 3 - Type of Contact by Category

Given the above data, we looked at what composites (category and subject) attract the major communication counts. Clearly Information, Maintenance issues and Project update are the leading headings in all customer communications to INDOT. Could this be improved by better communication between the customers and INDOT? Would steps like disseminating information through media like the internet help in reducing the communication that comes into INDOT?

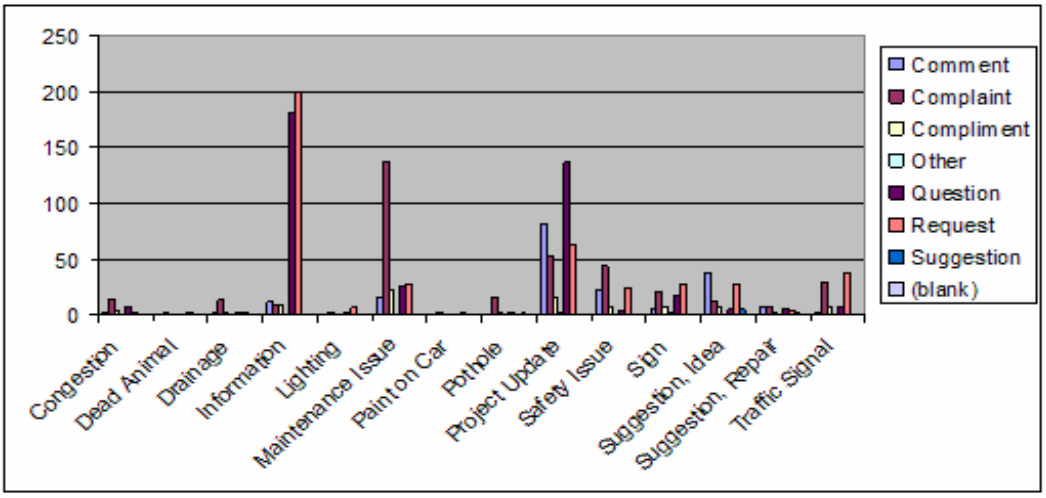


Figure 4 - Count of Contacts by Category

Lead Time analysis

Given the fact that the communication is coming into INDOT, the next logical step was to look into the lead times owing to the type of communication.

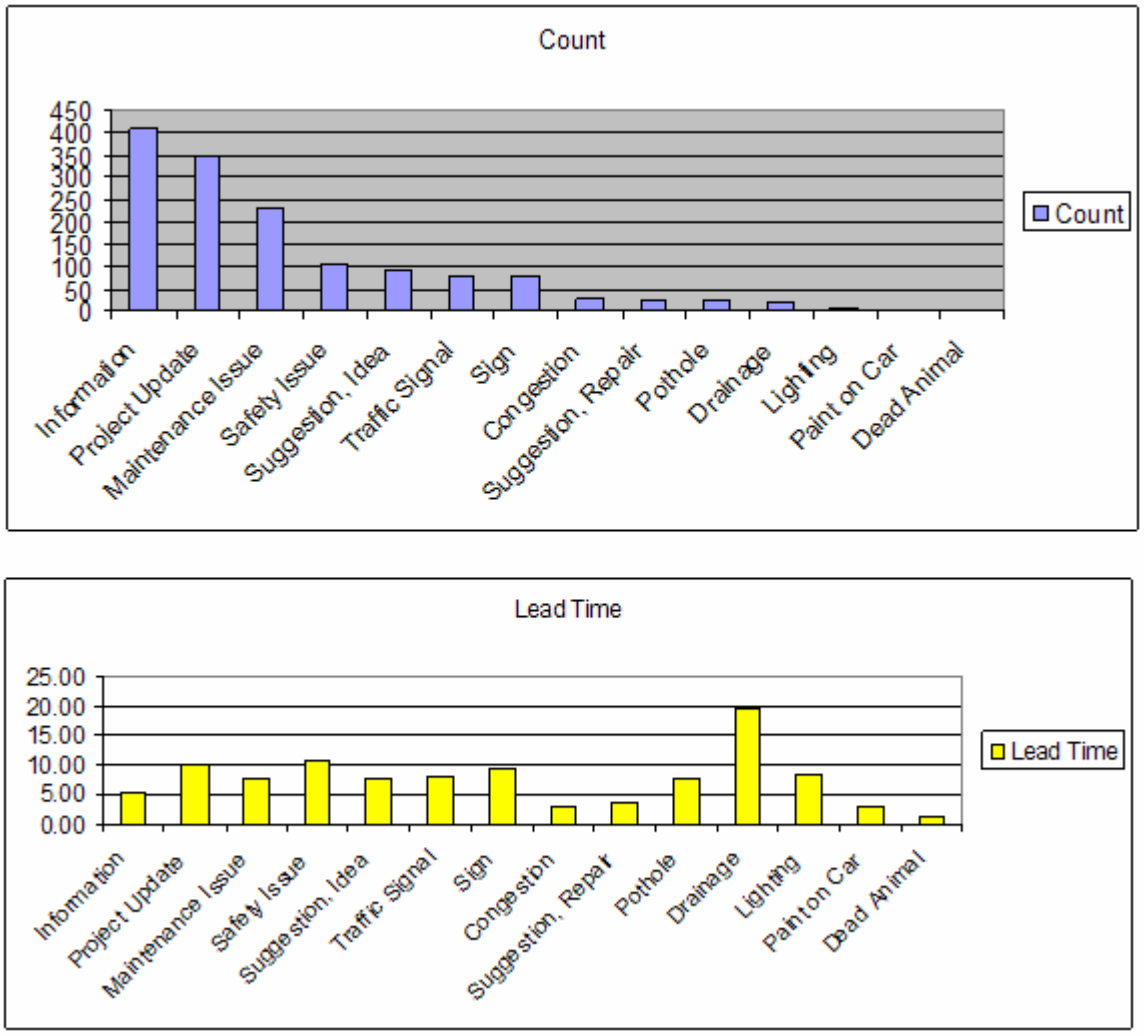


Figure 5 - Count and Lead-time by Category

These cumulative graphs showcase the Count and corresponding Lead Times of all the communication received at INDOT. The Red line in the second graph represents the average across all the calls received at INDOT. This clearly shows that the Calls from Suggestion, Idea and repair take the maximum number of days to solve. The top three

Pareto issues discussed previously – Information, Maintenance issues and Project update do not take more time than the other issues following that.

Geographic impact

The next analysis that was conducted on the data was on the basis of the region of origination of the call, all the customer communication was ordered by the zip code mentioned by the customer and then assigned to the district. The following pattern was observed.

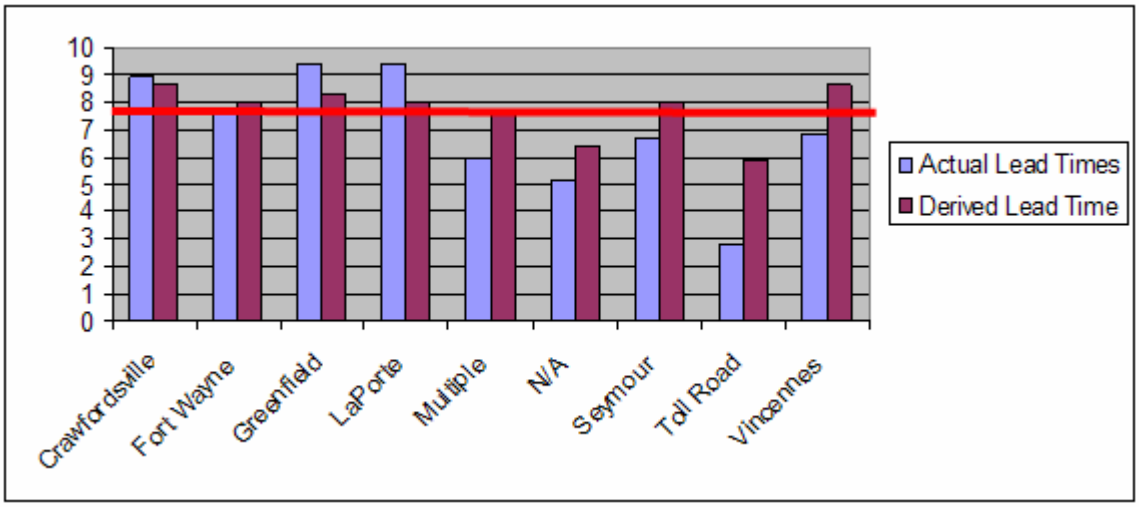


Figure 6 - Lead Times by District

To analyze the impact of districts individually and discount the type of calls received in the district, the derived lead times was calculated by taking the product of the call percentages received and the individual lead times by subject. As seen in the graph there is a difference in the response time by each district. This proves that the processes/response time across the districts vary which implies that a generic process has not been implemented across the districts.

Derived Lead time = Summation (% contact type * Avg Lead Time)/Total contacts

Customer Analysis

The next step in the data analysis is the analysis of the INDOT customers.

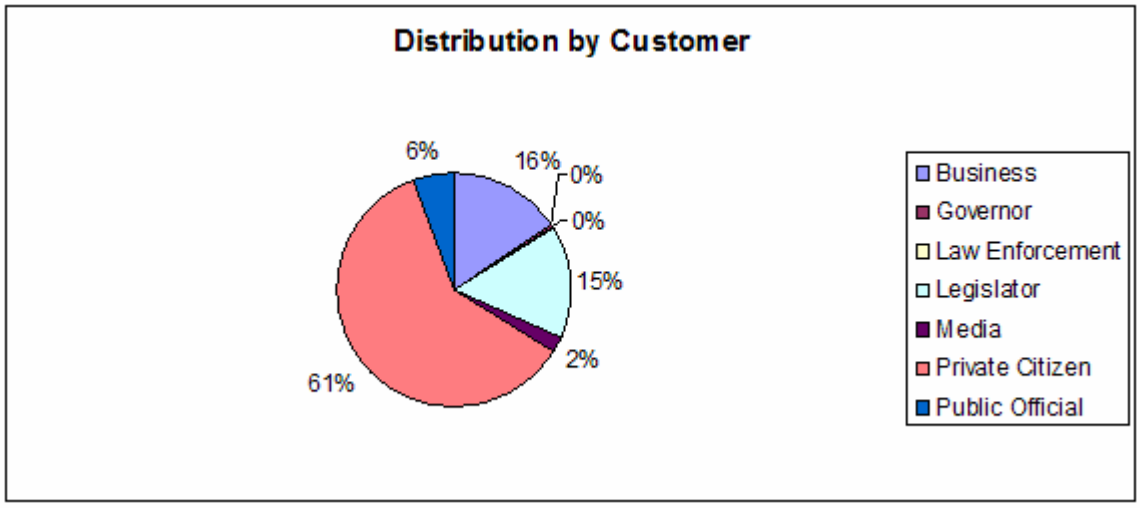


Figure 7 - Distribution by Customer Type

This graph aims to answer the question; who is our Customer? The primary customer is the private citizen with 64% percent of the calls. The second highest percentage is the legislator who is the most important customer for INDOT.

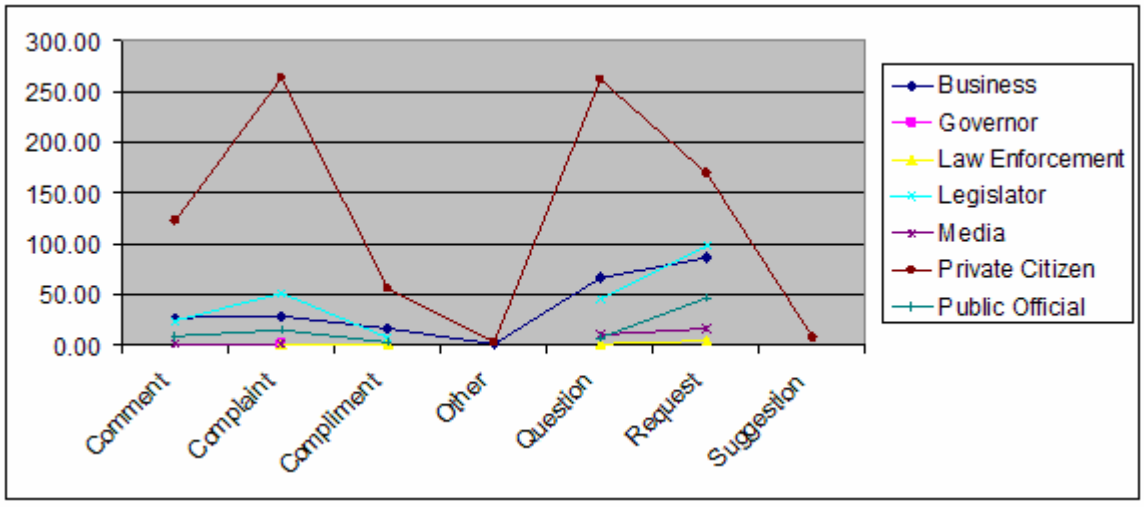


Figure 8 - Count of Complaint type by Customer type

The previous graph explains what each customer wants from INDOT, it is clear that the most percentage of requests comes from the legislators and the most number of complaints come from the citizen. This is an indication of the servicing criteria that should be used while facing individual customer types.

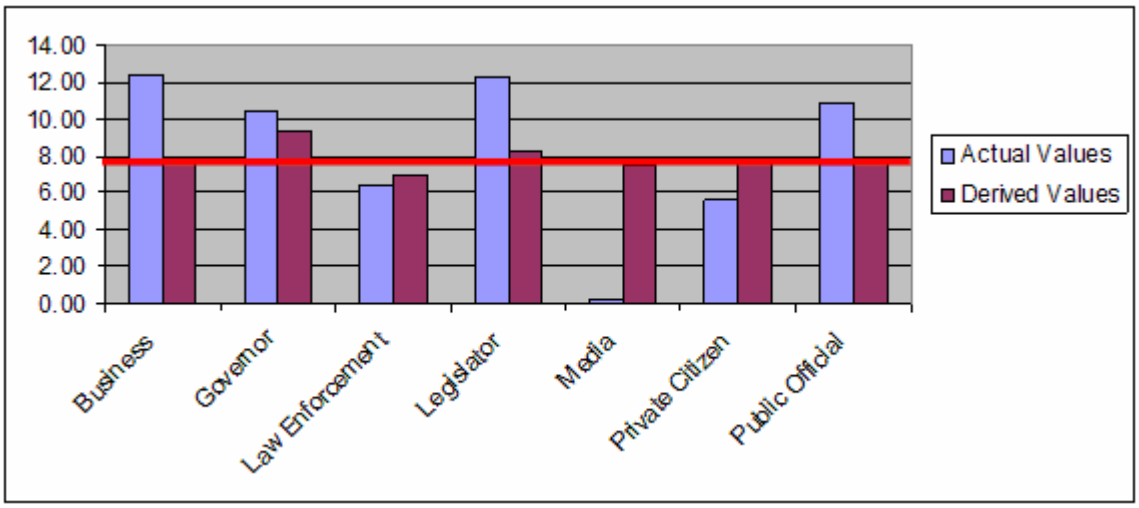


Figure 9 - Lead times by Customer Type

On conducting a similar analysis of the lead times and calculating a derived value of the response time for the customer types, a rather strange observation comes into view – the governor and legislator show the highest response time – is this because the most communication sent by these customer types are by snail mail rather than email?

Priority Analysis

It was mentioned that one of the criteria introduced by INDOT in the new IT system was priority; we then did some analysis to determine the impact of priority on the response times to the individual calls.

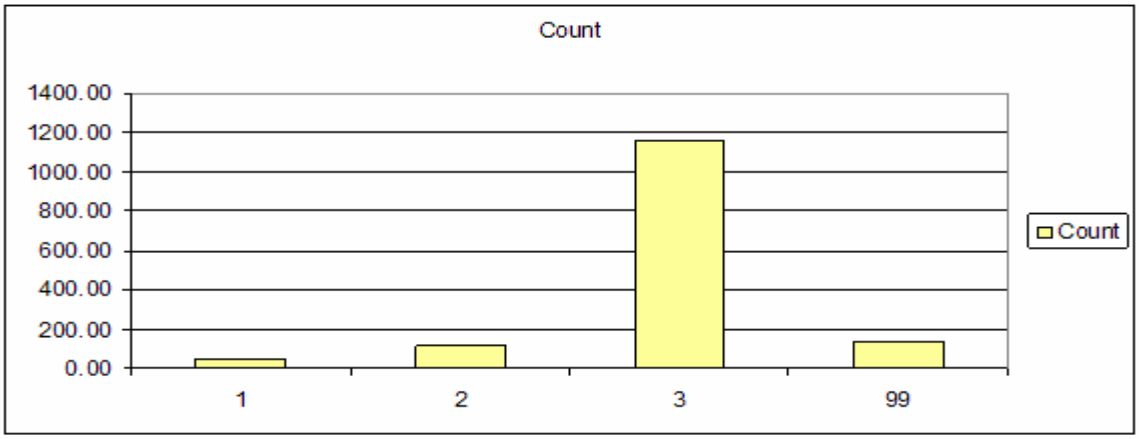


Figure 10 - Count of Calls by Priority

Most calls that were received in INDOT are in priority 3, priority 99 is the next highest. What does priority 99 signify?

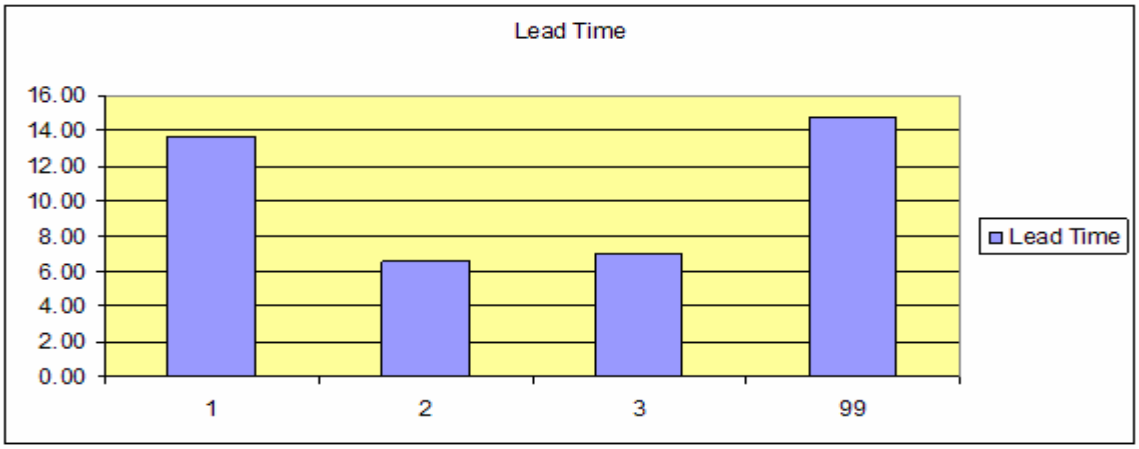


Figure 11 - Lead times by Priority

The lead times by priority show no major difference on the basis of the priority. Is the priority system implemented and is it effective?

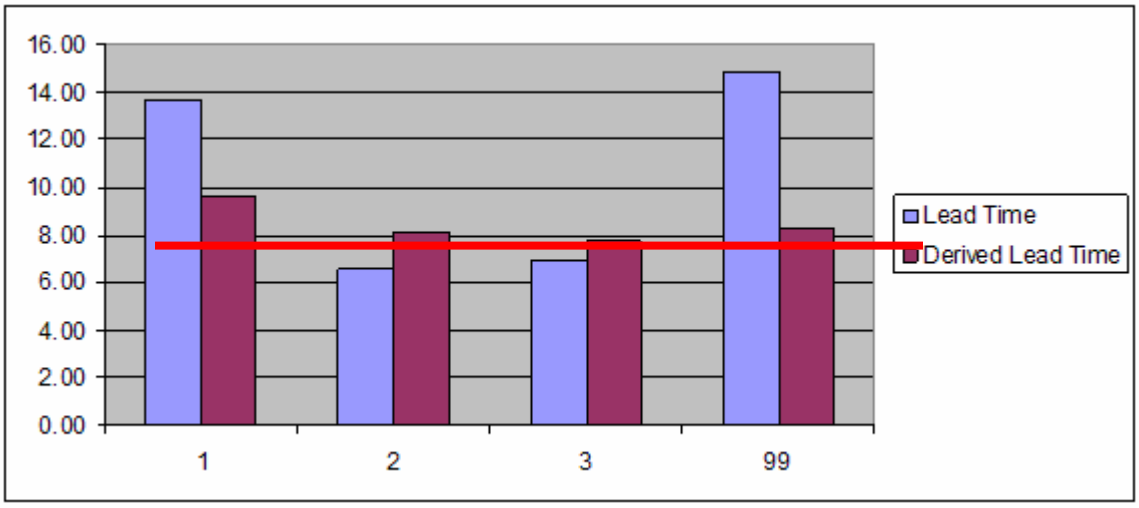


Figure 12 - Actual and Derived Lead times by Priority

This graph illustrates the difference in the lead times when the derived lead times concept was applied to priority lead times. It is clear that priorities 1 & 99 have actual lead times greater than their corresponding derived values.

1.8. Additional Information Required

Completeness of the Data: This analysis is based on a data of 1550 communications sent to us by INDOT. The communications was received in the center over a period of four months. The district data is not included in the analysis. In one of our interview sessions it was mentioned that A “Radio Log” exists for sub-districts and districts to log complaints, which are much higher in volume than what is received by Charlene at the Central Office. We have received no data extracts from the radio logs

Project handling process: In an interview with Krystal Cornett, Maintenance Management Supervisor, we were told that there is a system that is used by INDOT to manage the projects at a district level. The system does not currently tie up with the customer handling process. Would it be beneficial if the project handling system is integrated with the customer handling process? Further study is required to derive an answer.

Customer Satisfaction survey: A Customer satisfaction survey is designed to gauge customer expectations and satisfaction levels; we are awaiting feedback on the sample survey sent out

Video Conference: A video conference is planned to be organized with the district directors to get further inputs on the district processes regarding customer service.

2. Recommendations

Subject: A further detailed look is required into the subject classification; we believe that the subject classification employed currently might result in data mismatches and integrity issues

Priority: Priority needs to be incorporated in the handling and resolution of complaints, currently there seems to be no affect of the priority on the lead times of complaint handling

System Changes: The system would have to be changed to create a link between projects and the complaint process. We would be doing further study and proposing the changes.

Customer type: A further classification needs to be done on the basis of the customer type to delineate the customer importance.

Information: From a Pareto standpoint, the top three subjects of complaints are (1) Information, (2) Maintenance issues and (3) project update related. Looking at these issues, the INDOT website needs to be modeled in a way in which enables the customers to get the information without needing to send an email.

Next Steps

- Understand the classification of complaints
- Understand the complaint handling process at the districts or provide an ideal process
- Trace a few complaints to understand reasons for long response times
- Automate some of the information and project request complaint handling
- Develop an information system to improve response time

INDOT Customer Service

Understanding, linking and measuring customer complaint and satisfaction

Report – Phase 2

1. Introduction

1.1. Purpose of this document

The Phase 1 covered the data analysis of INDOT customer contacts received in the past six months and the team's interpretation of the results.

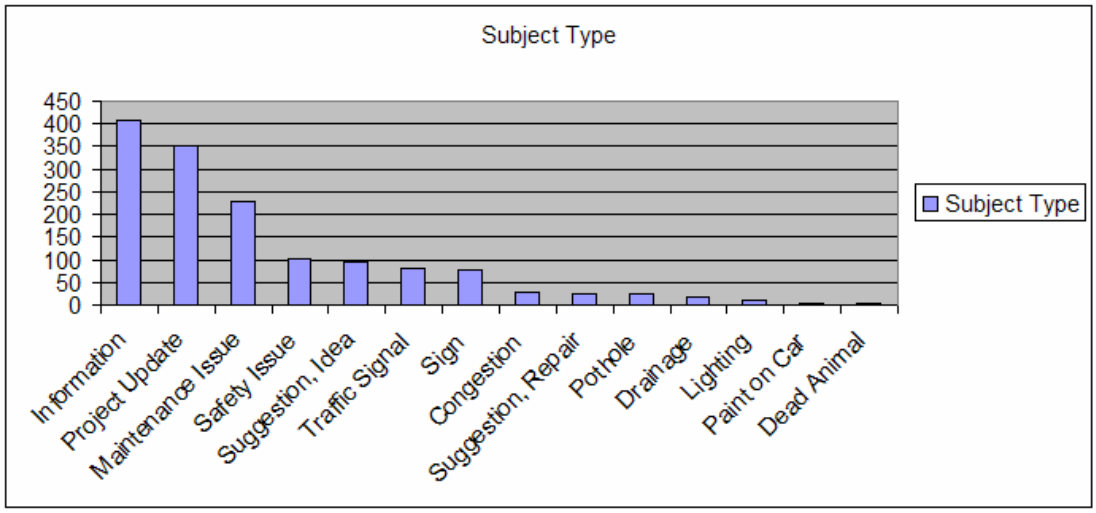


Figure 13 - Count by Subject Type

This distribution of contact types clearly showed that the top three subjects that required focus were: Information - 28%, Project Update - 24%, and Maintenance Issues - 16%.

Subject	Count	Avg Lead Time	Stddv	CV
Information	409	5.38	11.20	2.08
Project Update	351	9.81	18.75	1.91
Maintenance Issue	229	7.75	11.12	1.43

Figure 14 - Descriptive Statistics

Thus contributing 68% of all the calls and with a high standard deviation for response, this formed our focus set for the Phase 2 of the project, which was to study the processes

currently being used at INDOT for the customer service need. The Coefficient of variation is the highest for these calls which explains the variability in the response time.

2. Maintenance Issues

2.1. Organization Structure

It is very important to analyze the organizational structure and how it adheres to the needs if INDOT towards customer service. The following is the team's understanding of the structure

District Level Structure:

For Maintenance needs the INDOT district is organized as follows:

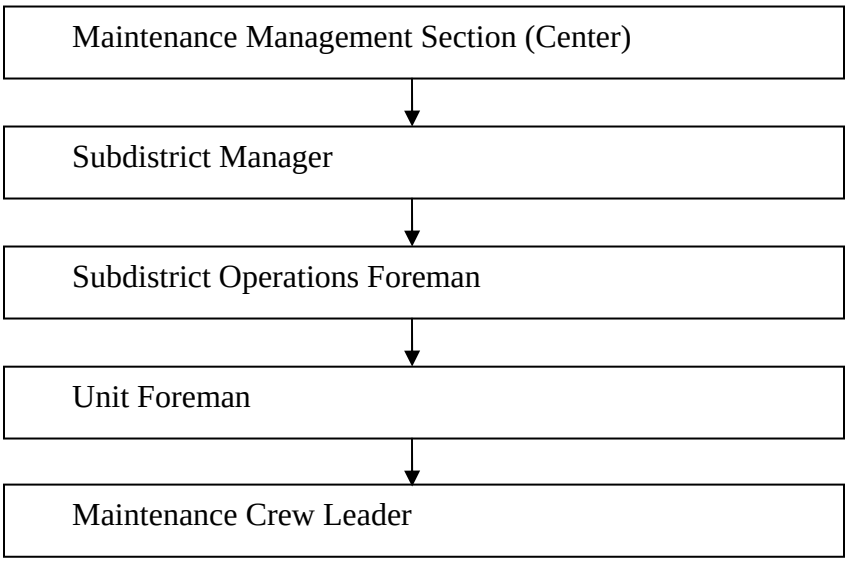


Figure 15 - District Level Organizational Structure

This is as extracted from the Work Management system guidelines. The roles and responsibilities are in Appendix A.

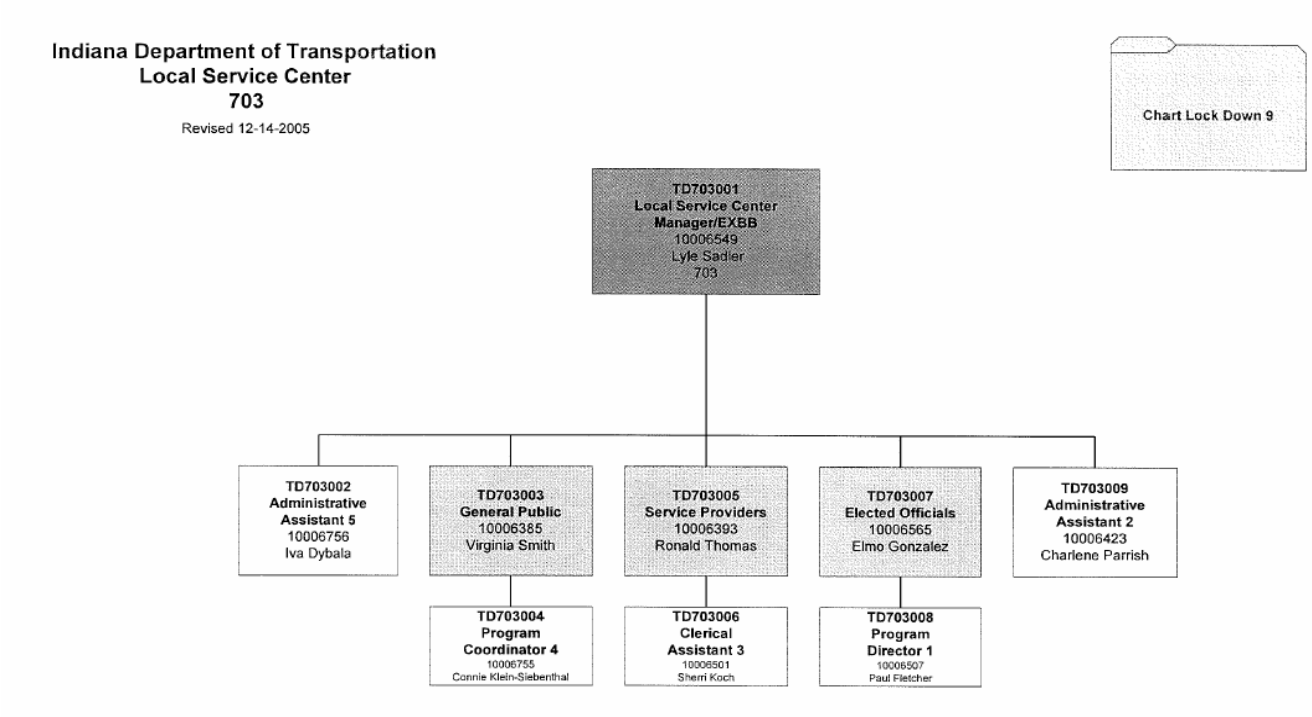


Figure 16 - Central Structure of the Local Resource Center

Correlations

Currently, there are no organizational correlations that exist between the local resource center and the maintenance division of INDOT. It is proposed that there should be some tie-in between the maintenance division of INDOT and the local resource center; this would aim to increase the responsiveness of the maintenance division towards the customer service initiative.

2.2. Process Outline

District Level

Step 1: Fill out a MM-326 – maintenance needed report, this report outlines the problem and the location of the problem, the following data is required:

- Sub district Name
- Date of the Observation
- Route Number
- Intersection/Identification
- Distance in Miles/feet
- Known reference point
- Milepost number
- Observation

Step 2: The Semi-Monthly Schedule, Form MM-329, is made from the WMS Work Calendar, Maintenance Needed Lists, and Maintenance Needed Reports. The schedules are prepared by the Operations Foreman and approved by the Sub district Manager. The Semi-Monthly Schedule lists, and prioritizes, the work to be performed in the next two-week period. The schedule also gives locations where the specific activities will be performed. The Unit Foremen will check the Semi-Monthly Schedule each day. They will assign crews to the activities on the schedule as resources and priorities dictate.

Step 3: This semi-monthly schedule is then used by the supervisor to create a crew card which decides who all will be involved in the activity. Each day, supervisors must decide what work will be done, who will do it, and what equipment and materials are needed. Assign the work using crew day cards. Use a separate card for each activity. The names of the activity will be printed on the card. Unit Foremen will write in the names of the people who will do the work, the equipment needed to perform the job, and the location of the work to be accomplished.

A Crew Day Card is a special kind of tool because it performs three important roles:

1) It authorizes a crew to perform a specific activity.

2) It is used to assign resources (personnel, equipment, and material) to that activity.

3) It is used to report the work accomplished.

Each Crew Day Card is tied directly to the maintenance budget for the Sub district. Each card represents a certain amount of money that was set aside to perform work on a particular activity. To report work accomplished, only one card per crew, per activity is to be used.

2.3. Contact resolution process – Central

When a customer contacts INDOT with a Maintenance request the following data is captured:

Field	Purpose	Ideal Entry by
ID	Unique System generated ID	System
First Name	Name of Caller	Individual
Last Name	Name of Caller	Individual
Address	Contact Address	Individual
City		
State		
Zip		
Phone Number	Contact specifics	Individual
Fax Number		
Email Address	Depends on Mode	
Type	Reporting	INDOT
Governor	Reporting	INDOT
Commissioner	Reporting	INDOT
Category	Reporting	INDOT
Subject	Reporting	INDOT
Explanation	Problem Description	INDOT
District	Identification of the place of the issue	Individual
Road		
County		
Intersection		
Reference Post		

Priority	For tracking	INDOT
Initial Response		INDOT
Sub	Tracking	INDOT
District	Tracking	INDOT
Division	Tracking	INDOT
contact_first	Reporting	System
contact_last	Reporting	System
Contacted by	Reporting	System
On Date	Reporting	System
At	Reporting	System
am/pm	Reporting	System
assigned_first	Tracking	System
assigned_last	Tracking	System
assigned_email	Tracking	System
Assigned By	Tracking	System

Figure 17 - Data from Maintenance Requests

This data is then used to generate a ticket number and the customer is sent a reply back. If it is a maintenance issue then the ticket is forwarded to the field officers directly and the correspondence is between Charlene and the field officers. The ticket is not inserted in the crew card or MM-329.

This process was illustrated in Figure 1.

Correlations

Currently, no correlations exist between this process and the process in the maintenance division. However, there are numerous opportunities for convergence. The

customer contact resolution process can be sufficiently integrated with the maintenance process. This would present the following advantages:

Monitoring the process and each individual occurrence would be easier, since the task would be present on the Work Management System, it would exist in the radar of the individual sub district and the district management.

Prioritization of the task can be along with all the other activities that happen in the area, this would enable the district management to make well informed decisions and reduce the chaos of decision making in the process

If technology permits, if a change occurs in any of the mentioned parameters, the system can be modified in such a way so as to send the customer an appropriate message which should be ratified by the customer service at the district or the center as appropriate.

3. Informational Issues

Types of Issues - Currently, the following informational queries are received. The table below captures the type of request, the action and the person who is responsible

Information	Action	Person
Damage to state property	accounting and control	Susie Hopkins
Compliments	appropriate person	
Motor vehicle issues	BMV	NA
Letting issues	Budget and Fiscal	April Schwering
Project and miscellaneous issues	Communications specialist	

Standards and specs	Contracts division	Bob Cales
Complaints and Concerns	District traffic Engr	
Motor Carrier issues	Federal DOT	Indiana State police
Intelligent transportation systems	operations support	Jay Wasson
Rest area questions/complaints	operations support	J. D. Brooks
adopt-a-highway	operations support	David lamb
permit issues	Permit Section	Brian Harvey
Prequalification	Prequal Engr	Danny Wampler
Public transit issues	Public Transport section	Larry Buckel
pothole damage	to the website	
Traffic counts	Traffic statistics section	Marcia Gustafson
Toll road issues		Mike McPhillips
County roads and city streets		
Public records request		Michelle Hillary

Figure 18 - Types of informational queries

Current Process – In the Current process, the questions are sent to Charlene and are forwarded to the respected departments by Charlene.

Correlations – Currently, no correlations exist between the process and the type of complaints that come in, what can be proposed however is a process by which the customer can select the type of information request he has and an email directly goes to the requisite person. The maintenance of this would be the responsibility of the customer service officer or any other person which INDOT decides. In addition to this changes can be made on the INDOT website to facilitate the customer inquiries.

4. Project Update

Current Process – The Project update process is similar to the INDOT central process for information. The contacts are received by Charlene and she checks on the project under question and sends an email to the district or sub district involved.

Correlations – Given the fact that the projects are tracked at the Work Management system level, it can be argued that there is a correlation that can be created by giving the Customer service people rights to the Work management system and access to the project information. Alternatively, the Information Technology website can be managed better to provide the customers with information on the website itself.

5. Summary

5.1. Waste elimination

Any activity at the INDOT contact center that does not add value to a service can be considered as waste. The overall objective of an efficient customer service organization is to reduce waste without plummeting the service quality, i.e. to speed up throughput and handle times (including wrap-up times), while sustaining an aspired level of customer satisfaction. This can be achieved by:

Customer development: Since customer interaction is a crucial part of any service one of the most effective methods to eliminate waste is continuous customer development. An experienced and well-informed customer who knows the procedures as well as the

service can reduce customer service expenditures to a large extent. The more information, e.g. on service-levels, service and project update times, that is provided at the beginning of each transaction, the less questions arise throughout in a later phase. Another cost-effective way to keep customers informed are “push” services, which forward emails or short messages to the customers and keep them up to date. Additionally FAQ-pages can be posted on the website.

Flexible Resources: Waste elimination in customer service requires universally trained agents and scaleable open technology architecture to adapt faster and at low costs to changes in the environment. Staffing flexibility can be archived by additional training and rotation schedules, so that most Customer Service Representatives are capable of handling different communication channels and service functions.

Quality at the source: In a “lean” customer service, process quality has to be high. The quality objective is zero defects, e.g. low data entry error rates via self-service capabilities, low hold times and high first-time-final rates by access to real-time information systems to minimize the amount of rework (waste). In this context a high employee involvement is essential, because supervisors and front-line agents can detect and eradicate quality problems much faster and more easily than any quality circle. The essence of waste elimination is: a) the willingness of the agents to spot quality problems, b) to generate their own ideas for improvements, c) to perform different service functions, and d) to adjust their working routines accordingly. Management’s task is to clarify the workflow as well as the quality standards, but also the means of improvement.

Autonomous maintenance: e-technologies do not operate without breakdowns. These breakdowns seldom occur at convenient times and frequent failures have a significant impact on customer loyalty and market share, especially for time-critical processes. To reduce the number of service failures, CSRs should maintain their own equipment with daily care, interpret operating data and identify signs of deterioration prior to failure. At the same time, supervisors should evaluate the equipment and

processes for their ability to meet the requirements, to serve consistently within tolerance, and to fit the scale and capacity of the team.

5.2. Variability reduction

Another central strategy to increase process efficiency is variability reduction. Next to the randomness of inbound caller behavior, which cannot be changed by either management or by the CSR, several variability factors exist that increase customer service costs. Variability is typically caused by tolerating waste and/or by poor management. One approach to reduce variability in service is to shield against unexpected demand through more accurate forecasts. In customer service forecast accuracy is not so much a question of the forecasting method applied, but a matter of collaborative forecasting and planning between the different departments. Knowing and being involved in the planning and timing is essential to safeguard against unexpected demand fluctuations. Furthermore, internal measures must be taken to synchronize the capacity available for incoming contacts, e.g. by offering self-service capabilities that give customers a choice when the service lines are busy, or by employing more part-time employees, which enlarges the degree of flexibility in workforce scheduling.

INDOT Customer Service

Understanding, linking and measuring customer complaint and satisfaction

Report – Phase 3

1. Introduction

1.1. Purpose of this document

The document outlines the findings of the work carried out do so far with INDOT. It also would outline the findings and suggestions to improve the customer service process in INDOT. This document covers the findings of the study and the recommendations on the basis of the analysis of data received from Central Office and Crawfordsville District.

GSCMI is currently reviewing the INDOT customer service process in accordance with the new initiative of customer focus. The team has reviewed the current INDOT database of 737 customer communications. Based on this study and data analytics, the team is presenting the findings, initial recommendations and next steps.

The focus of the analysis in Phase 3 was to map and analyze the flow of information at the Central Office and District. The objective is to identify the gaps in process and recommend suitable solutions.

2. Results of the Study

2.1. Data Source

Data used for analysis was obtained from the Center and District independently. The center provided data in three Excel files on 25 May 2006. These files were generated from the Access database used for tracking customer complaints. These files had over 3000 records from February 2005 through May 2006. The period April through May 2006 with 737 records across the state was considered for analysis. Of these 737 records, 66 were assigned to Crawfordsville district. Each case in the center's database is identified by a unique number. Crawfordsville district was taken as a representative candidate for a typical district and the data was requested. Crawfordsville district provided data in the form of 161 e-mails corresponding to cases handles in April-May 2006. These included cases referred by the center and those directly originating at the district. A total of 41 cases were identified from the 161 e-mails. The district did not use a unique identifier for the cases. Appendix B describes the dataset. The following Pareto chart for the center and Crawfordsville district shows the comparison of the distribution based on the type of case:

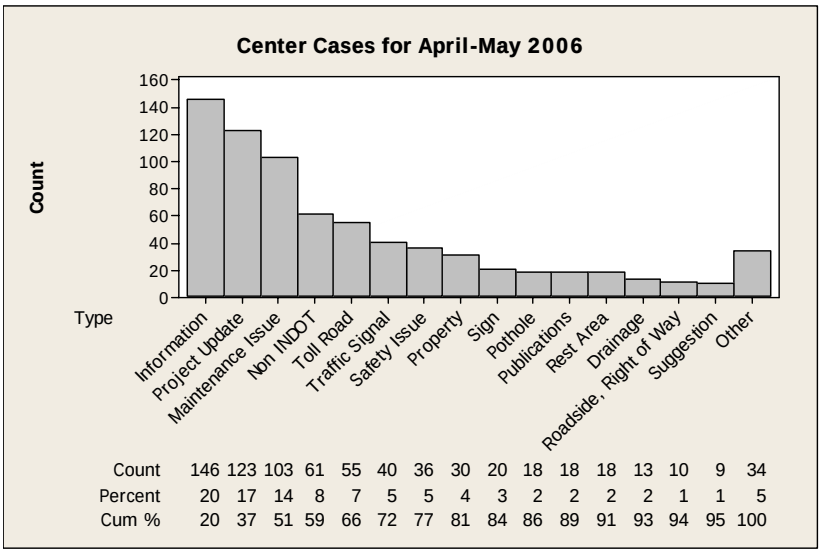


Figure 19- Total Center Cases April - May 2006

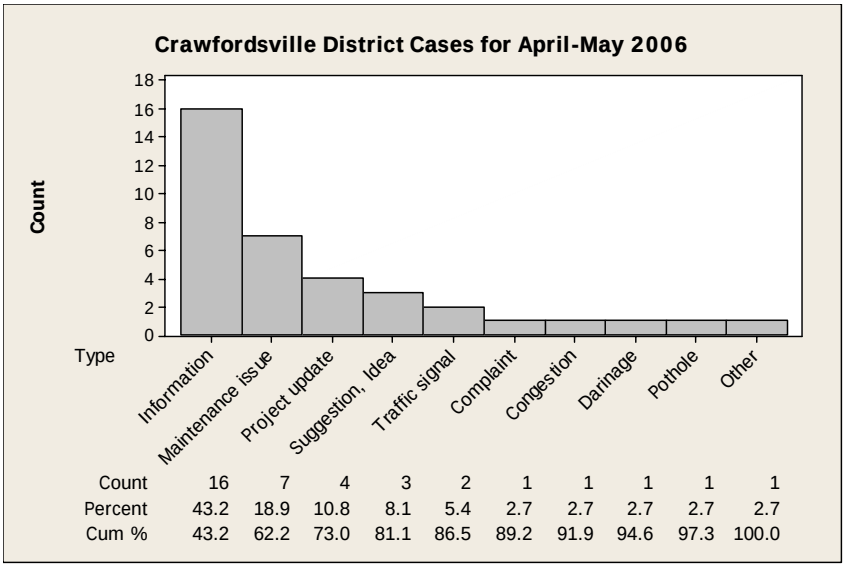


Figure 20 - Crawfordsville District Cases for April - May 2005

The distribution of cases and the top categories show that Crawfordsville district follows a similar pattern as the complete state and therefore can be taken to represent the typical case for a district. Further analysis of data is based on Crawfordsville data and Center's data pertaining to Crawfordsville district.

2.2. Data Analysis Results

Center: From the 737 records for April-May 2006, 66 records pertained to Crawfordsville district. Of these 14 cases could be traced in Crawfordsville district the rest of the cases were closed as shown in center's database but had no corresponding information in the data supplied by the district. The mean and standard deviation for lead time in these 66 cases was 11.76 & 11.28 days respectively. The lead time distribution for top four categories of cases is as follows:

Category	Mean	Standard Deviation
Information	17.20	14.25
Maintenance issue	10.48	8.97
Project Update	8.62	8.51
Roadside, right of way	17.14	14.91

Figure 21 - Lead time by Main Categories

District: Crawfordsville district had a total of 41 cases which included cases referred by center and those generated at the district. Fourteen cases could be traced to the center's data. Eight other cases were referred by the center but could not be traced in centers data. Three other cases were traced in center's data but were assigned to districts other than Crawfordsville. Thus a total of 25 out of the 41 cases were referred by the center and the rest 16 were generated at the district.

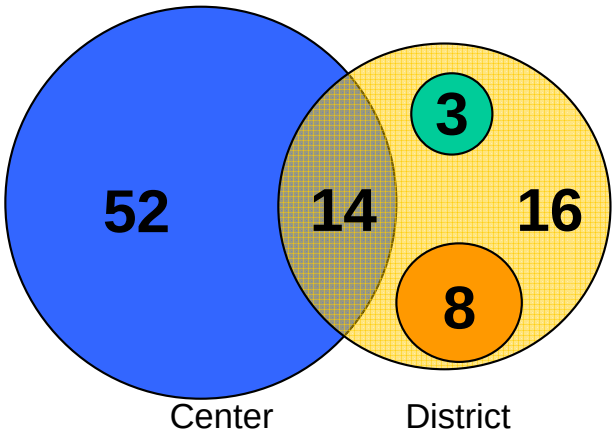


Figure 22 - Center and District Discrepancies

The lead time distribution for Center and district generated cases is as follows:

Case Origin	Mean	Standard Deviation
Center	5.00	4.47
District	2.29	3.17

Figure 23 - Center and District Lead Times

Further analysis of the lead time as seen by the Center and District shows distinct difference. Following is the comparison of the lead time distribution:

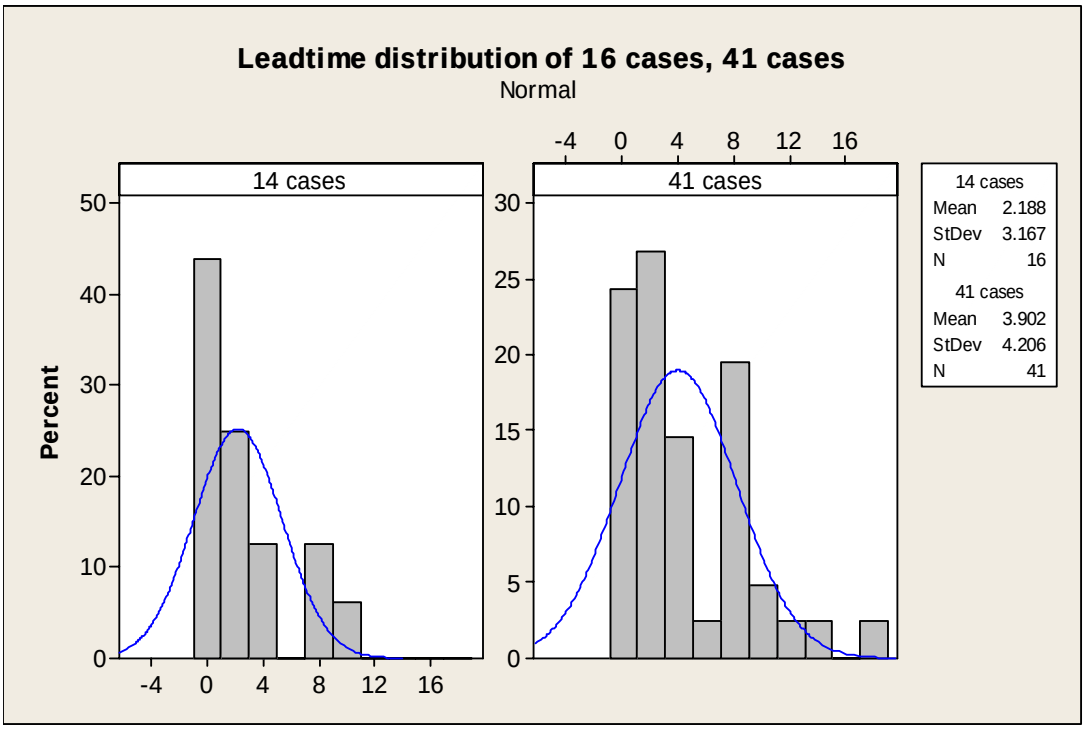


Figure 24 - Lead-time distribution of Shared Cases

The team also considered the workload arising from cases at Crawfordsville district. The following chart shows the cases handled through April and May 2006.

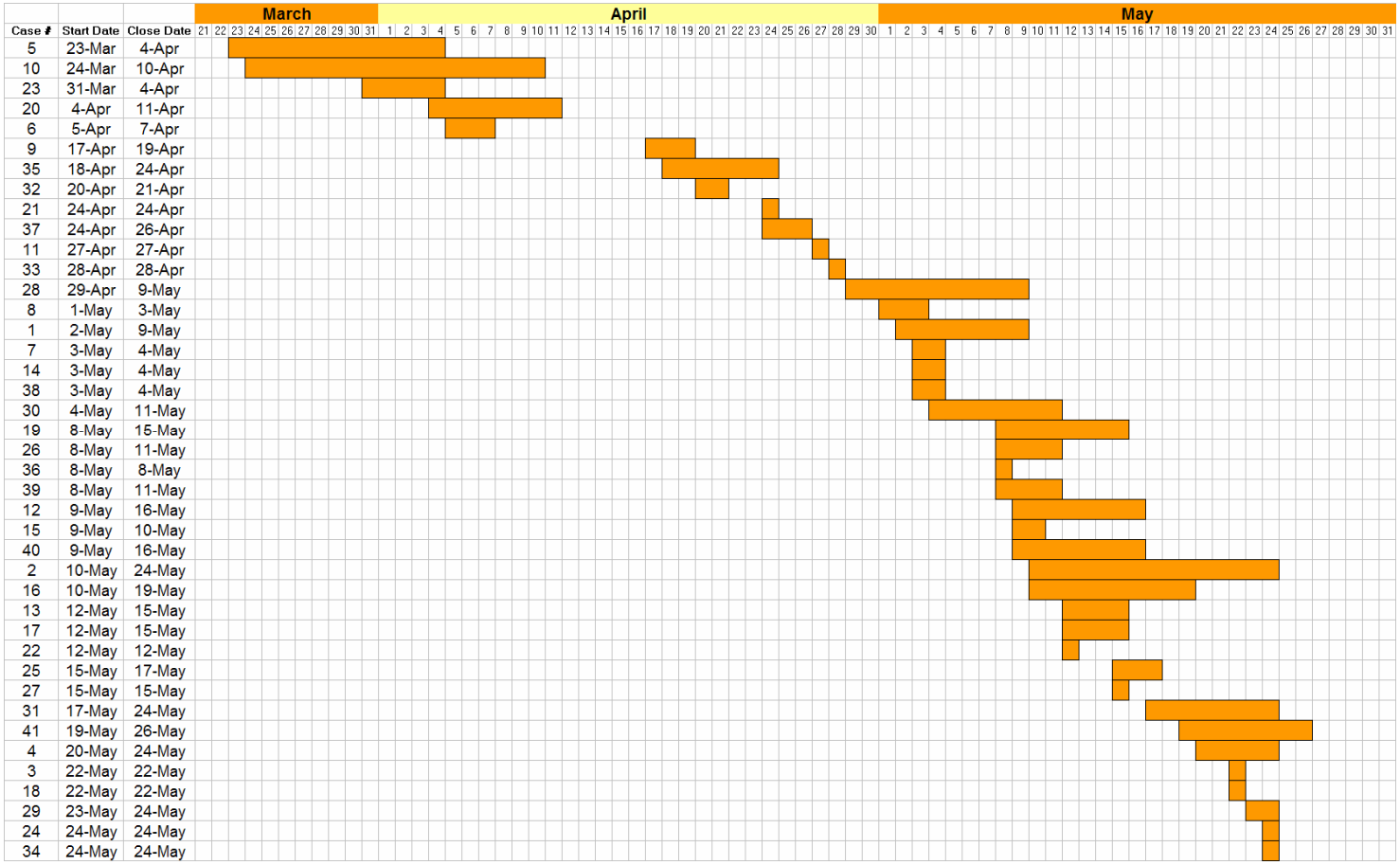


Figure 25 - Gantt chart of Complaints

Analyzing the particular cases that caused the significant difference in lead time performance the following potential root causes were established:

- Omission of information at district and center
- Data entry errors
- District assignment errors at center
- Information storage and retrieval issues at district
- Communication breakdown between district and center
- Lack of standardized structure for information transfer

Some of the other significant issues noticed were:

- No cases were reported by maintenance.
- Cases originating at the district did not get reported to the center and escaped the central monitoring of lead times and work load.
- There was no specific process for monitoring the age of cases and prioritization.

3. Recommendations

- Track all cases at the center irrespective of the origin.
- Publish a weekly report of outstanding cases with ageing information.
- Establish a weekly review meeting between center and districts.
- Implement single tracking code for cases at center and district.
- Track lead time performance to targets.
- Introduce pre-printed or email forms for standardization of information and error proofing.

INDOT Customer Service

Understanding, linking and measuring customer complaint and satisfaction

Training Tool – Phase 4

***Please note: The figures and appendices accompanying the case are not listed separately in the Table of Contents or List of Figures**

INDOT Customer Service

- Understanding, measuring and linking key performance indicators -

For public service organizations, the emphasis has shifted from just the measurement of financial performance and budget control to the management and execution of business strategies. Modern public organizations like the Indiana Department of Transportation (INDOT) have to focus on several strategic themes, such as meeting citizen needs, improving operational efficiency and enhancing community safety, while dealing with a broad range of stakeholders. To align the overall mission with customer requirements and day-to-day work is a balancing act that requires a high-quality management system at all levels. The goal of a recent INDOT initiative is to improve customer communication and to link customer service closer to operations.

I. INDOT Customer Service

Transportation is next to education, health and human services, is one of the most important public services. In Indiana the 2006-2007 biennium budget for transportation includes $3.5 billion in state dedicated and federal funds, while the mission of INDOT is to build, maintain, and operate a top-tier infrastructure enhancing safety, mobility and economic growth. This responsibility also includes customer service on items such as traffic control devices like signs and traffic signals as well as construction and maintenance operations like snow removal and pothole patching.

Overall, INDOT's customer service function involves several divisions and departments at the state, district and sub district level. With the central office located in Indianapolis, each of the six different districts reporting to the central office has five to six separate sub districts. (see Exhibit I)

For instance, at the state level the INDOT Operations Support Division establishes construction, maintenance, and traffic policies and procedures, monitors compliance of these policies in the districts as well as guides the district's operations for construction, maintenance,

and traffic. At the same time, the Office of Communications oversees INDOT's obligation to provide citizens, lawmakers and media access to information about the department's activities. It is responsible for issuing news releases and media advisories with information about the department's district and division activities. Other departments frequently involved in customer service activities are the Legal Division, Accounting and Control, the Contracts and Construction Division as well as the Environment, Planning and Engineering Division.

Furthermore, district offices handle potholes in construction areas, detours around construction zones, traffic signals (malfunctions, request for new ones, etc.), rest parks, permit questions, general road and bridge construction on interstate, state roads and US roads. Each district is equipped with one Customer Service Representative (CSR) to support field engineers.

Sub district offices handle potholes and other maintenance activities in non-construction zones, snow removal, removal of dead animals from right of way or highways, adopt-a-highway program, mowing, permit questions, debris along Indiana highways.

In this setting, INDOT is contacted by private citizens, businesses and other stakeholders, such as public officials and legislators, at different levels and thru various departments requesting information, project updates or repairs, which makes customer service a complex task.

II. Customer Service Processes

Because several customer communication processes at INDOT have not been formalized, as a first step a contact database was implemented at the central office, to achieve a better understanding of the activities involved and to attain an IT-tool for process control and improvement. In this database customer contact information, such as address and customer type, the date, category, and subject as well as an explanation of the inquiry was gathered. Also organizational information, like the location and closing date of an issue, the offices as well as the persons contacted, was collected.

An analysis of 1400 incoming requests collected between May and October 2005 indicates that the majority of queries originate from private citizen (60%) and businesses (16%), whereby

50 to 100 calls, emails, faxes or letters arrive each week. Most of the contacts are information requests (28%) or relate to project update (24%) and maintenance (16%) issues (see Exhibit II). The different contact handling processes at the state level will be described in more detail in the following sections.

Information Request

Incoming information requests are handled by one Customer Service Agent, who forwards the inquiry to a designated person in a department or district office and also replies to the customer after she received a response. A reply to an information requests takes on average 5 days, while there is a high variability in response times. Overall the majority of questions are resolved within 1 to 17 days. Typically informational queries comprise damage to state property, traffic complaints, motor vehicle or letting issues, standards and specifications and miscellaneous issues.

Project Update Issues

Contacts that relate to project updates are handled similar to the process for information requests. The contacts are received by the same central CSR, who deals with information requests. She checks on the project under question and sends an email to the district or sub district involved. A project update requires on average 10 days and the processing times also incur a significant variability. Most project update requests are handled within 1 to 28 days.

Maintenance Issues

In contrast to the prior processes, the handling of maintenance issues is more complex, because it depends on the severity of the problem and involves the scheduling of the operational field staff of INDOT. In general the resolution of maintenance issues process can be divided into three phases. In the issue receipt phase the particular issue (complaint, suggestion, inquiry, etc.) is sent to the Maintenance Management Section, which is part of the INDOT Operations Support Division. The Maintenance Management Section then identifies the responsible Ops Manager at

the sub district level and emails the issue description. In the second step, the observation phase, the problem is assessed by field personnel. In this context an observation needs to be scheduled to investigate whether the issue is in fact a viable one. If this is the case, the problem is then documented for review and assignment by a unit foreman and/or sub district Ops Manager. Yet, in some cases repair issues are not under the jurisdiction of INDOT, which is limited to state roads, interstates and U.S. routes as well as selected railroads, aeronautics and public transits. For this reason maintenance requests cannot be prioritized by a CSR at the central level. The resolution phase is the final stage of the customer service process. In the case of an emergency, a unit crew is scheduled to immediately address the problem by either the sub district Ops Manager or unit foreman. If not, the repair work to be completed is ranked by importance and receipt in the Work Management System (WMS). Once a crew has completed the work, a record of the resources used and actual work completed as well as the number of hours used to perform is submitted to the clerk at the sub district level which in turn enters the information in the WMS. The WMS is connected electronically throughout the INDOT organization allowing employees at the sub district, district, and central level to immediately access data either through standard reporting. Customer service feedback on a maintenance issue is provided on average after 8 days, while the majority of contacts are resolved within 1 to 18 days.

Because there is no single point of entry for customer contacts at INDOT, equivalent processes exist at the district and sub district level. Sometimes even the unit personnel or unit foremen receive calls from public citizen and are able to address a maintenance issue immediately, which makes it difficult to keep track of all incoming requests.

As mentioned before, the aim of this initiative is to improve the described processes and link customer service closer to INDOT operations. This can be achieved by utilizing a strategic management tool, known as the Balanced Scorecard (BSC). The BSC approach translates INDOT's mission into a set of goals across four perspectives: financial, operational, customer, and learning. These goals can then be further translated into a system of performance measures that could effectively communicate the strategic focus on customer service to the entire organization. In addition, the BSC allows benchmarking INDOT's performance across districts. In bench-

marking, care must be taken to concentrate on meaningful measures that are (1) understandable, i.e. are expressed in clear terms to avoid misinterpretation or vagueness; (2) attainable, i.e. can be met with reasonable effort; (3) valid, i.e. capture and reflect the main features of the process/ aspect to be measured; and most importantly (4) customer-focused.

III. INDOT's Balanced Scorecard

The BSC is a conceptual framework for translating INDOT's mission into a set of performance indicators distributed among four perspectives: financial, customer, operations, and learning and growth.[1] Performance indicators are maintained to measure an organization's progress toward achieving its vision; other indicators are maintained to measure the long term drivers of success. Through the BSC an organization monitors both its current performance (finance and budgets, customer satisfaction and operational results) and its efforts to enhance core processes, motivate employees, and upgrade information systems, i.e. its ability to learn and improve (see Figure 1).

[1] see Kaplan and Norton, The Balanced Scorecard--Measures That Drive Performance, in: Harvard Business Review, Jan-Feb 1992; and The Balanced Scorecard- Translating Strategy into Action, in: Harvard Business School Press, 1996.

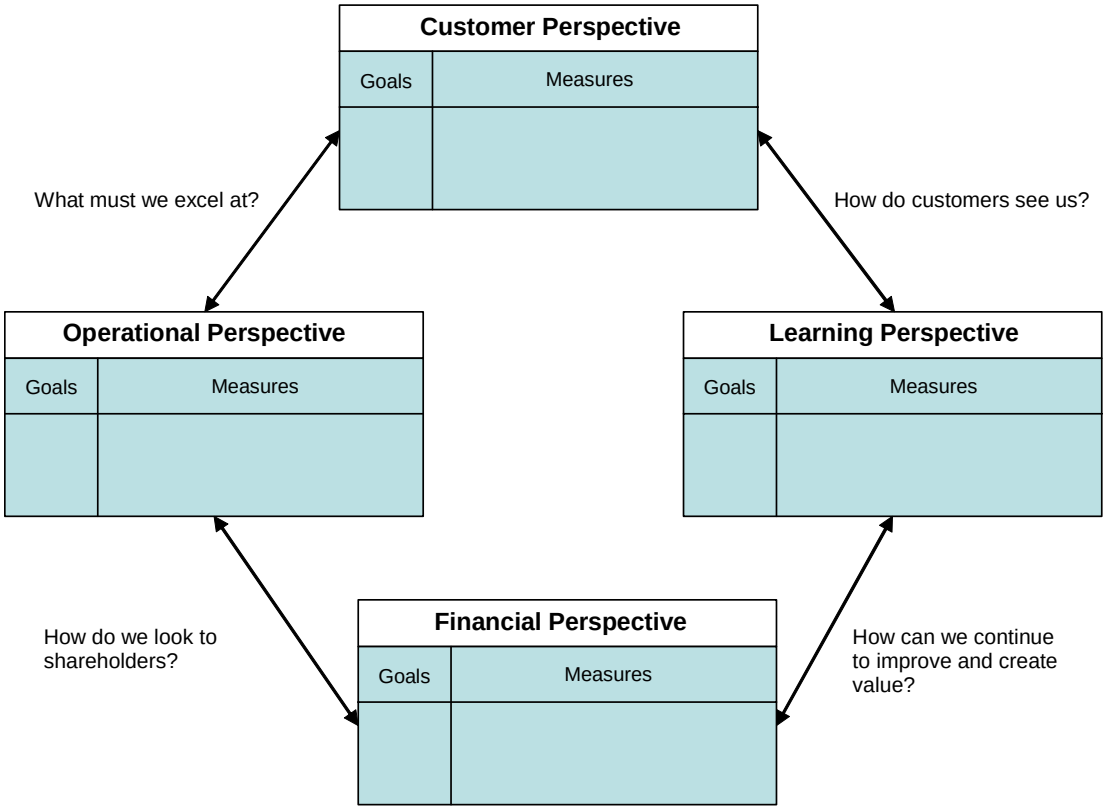


Figure 1: Balanced Scorecard (adapted from Kaplan and Norton 1992)

Customer Perspective

This perspective captures the ability of an organization to provide quality goods and services, effective delivery, and overall customer satisfaction. At INDOT, both the recipient of the services (private citizen and businesses) and internal associates (public officials and legislators) are regarded as customers of the business processes. Note that the principal driver of performance is different than in the private sector; namely, customers and stakeholders take preeminence over financial results. Recognizing that budgets are limiting factors, public service organizations have a greater stewardship responsibility and focus than most private sector entities do.

Financial Perspective

As a result also the financial perspective differs from that of the private sector. Strategic financial objectives in the private sector generally represent long-range targets of profit-seeking entities, operating in a commercial environment. Financial considerations for public service organizations on the other hand have an enabling or a constraining role, but will rarely be the primary objective of the business system. Success for such organizations should be measured by how effectively and efficiently every department meets the needs of their constituencies. At INDOT this perspective captures cost efficiency, delivering maximum value to the customer for each dollar spent.

Operational Perspective

This perspective captures the internal business processes against measures that lead to financial success and satisfied customers. To meet financial objectives and customers expectations, organizations must identify the key business processes at which they must excel. Key processes are monitored to ensure that outcomes are satisfactory. At INDOT primary business processes at the state level are organized in divisions, such as Contracts and Construction, Environment, Planning and Engineering, Office of Communications and Operations Support. These divisions are supported by secondary business processes, like Accounting and Control, Budget and Fiscal Management, Human Resources and Internal Affairs, Research etc.

Learning Perspective

This perspective encapsulates the ability of employees, information systems, and organizational alignment to manage the business and adapt to change. INDOT operations will only succeed if adequately skilled and motivated employees, supplied with accurate and timely information, are driving them. The learning perspective takes on increased importance in public organizations that are undergoing major changes. To meet changing requirements and customer expectations, employees are asked to take on new responsibilities, and may require skills, capabilities, technologies, and process designs that were not available before.

Summarizing it can be said, that the BSC provides INDOT with a strategic framework for using performance measurement. This information helps set agreed-upon performance goals, allocate and prioritize resources, inform managers to either confirm or change current policy or program directions to meet those goals, and report on the success in meeting those goals.

INDOT's mission of building, maintaining, and operating a superior transportation system to enhance community safety, mobility and economic growth, while meeting customer needs, leads to a BSC with many different facets. The description of all aspects will exceed the scope of this case study. In the following we will therefore focus only on customer service and how customer needs can be integrated into INDOT's operations.

IV. Customer Service Performance Measurement

Each objective, here "meeting customer needs", should be supported by at least one measure that will indicate the organization's performance against that objective. In general, measures should be precisely defined, including the population to be measured, the method of measurement, the data source, and the time period for the measurement.

Customer Satisfaction

Obviously, customer satisfaction is the key performance indicator, which captures the customer perspective of INDOT's operations. In this context different stakeholder, i.e. private citizen, businesses and public officials should be distinguished, which allows INDOT to prioritize its resources. Typically satisfaction is measured by a questionnaire on a 5-point or 7-point-scale. An efficient and at the same time fast approach of measuring customer satisfaction are computer-assisted telephone surveys, email or web surveys, which can be directly linked to enhancements in INDOT operations, but should be backed up by regular 6-month surveys to obtain a unified customer view across the organization. Email surveys could be randomly sent to customers, who received customer support within the last couple of days, excluding those who

have recently responded to a survey and those who requested exclusion from the poll. The results can be used to (a) identify areas of dissatisfaction and (b) evaluate CSR performance.

Response Times

From an operational perspective the response time to an inquiry is a key performance indicator of customer service that is closely linked to customer satisfaction. Due to the different handling processes the response times for information requests, projects updates as well as maintenance issues could be distinguished. Based on the data of the customer contact database the response time of an information request or project update issue can be defined as the time elapsed between the initial contact and its resolution, while for maintenance issues the first feedback determines the response time. In addition other performance metrics, such as the number of pot holes or the lead time of repairs, which describe INDOT's operational performance and influence customer satisfaction should be utilized in the BSC.

Cost per Contact

The financial perspective of INDOT's customer service can be captured by the cost per contact, which are defined as the yearly budget at the central and district level for customer service (incl. personnel, training, IT-related cost) divided by the cases solved collected in the customer contact database.

Variability Reduction

Finally, the learning perspective of INDOT's customer service should encapsulate the ability of employees, information systems, and organizational alignment to manage the business and adapt to change. One way to capture process capabilities and improvements is to measure the variability of response times with control charts (see Exhibit III), whereby a low standard deviation indicates that the process is under control.

V. Summary

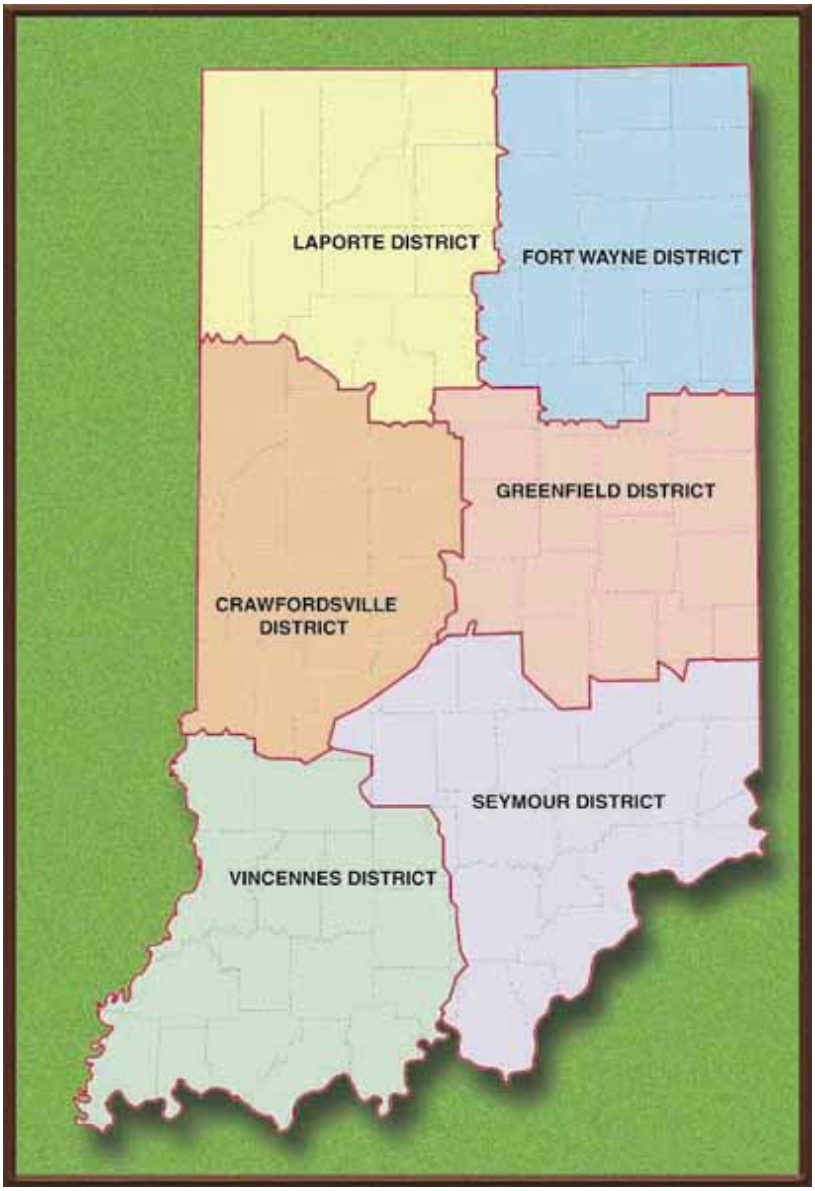
The proposed balanced scorecard approach enables INDOT to pursue incremental customer service improvements. The overall objective of an efficient customer service organization is to reduce excess activities without plummeting service quality, i.e. to speed up response times, while sustaining an aspired level of information quality and customer satisfaction. This can be achieved in different ways.

Since customer interaction is a crucial part of any service one of the most effective methods to eliminate waste is continuous customer development. A well-informed customer who knows the procedures as well as the service can reduce customer service expenditures to a large extent. The more information, e.g. response times, that is provided at the beginning of each transaction, the less questions arise in a later phase. Another cost-effective way to keep customers informed are “push” services, which forward emails or short messages to the customers and keep them up to date. Additionally FAQ-pages can be posted on the website.

Customer service requires universally trained CSR’s and a scaleable IT- architecture to adapt fast and at low costs to changes in the environment. Staffing flexibility can be archived by additional training and rotation schedules, so that CSRs are capable of handling different service functions.

In a “lean” customer service, process quality has to be high. The quality objective is zero defects, e.g. no data entry errors, waiting times and a high first-time-final rates by access to real-time information systems to minimize the amount of rework. In this context employee involvement is essential, because CSR’s at the district level can detect and eradicate quality problems much faster and more easily than any quality circle or central level organization. The essence is (a) the willingness of CSR’s to spot quality problems, (b) to generate their own ideas for improvements, (c) to perform different service functions, and (d) to adjust their working routines accordingly. Management’s task is to clarify the workflow as well as the quality standards, but also the means of improvement.

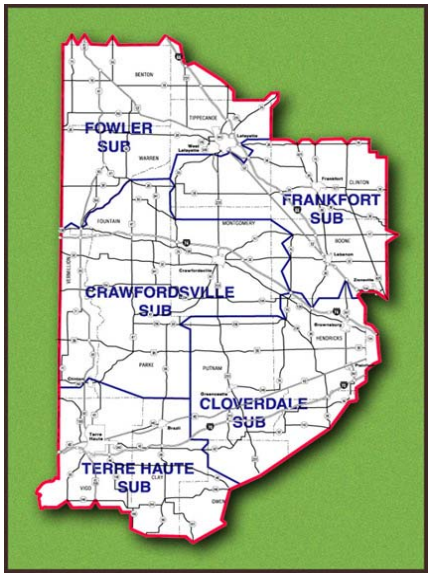
Exhibit I: INDOT's Districts



Laporte District

Forte Wayne District

Crawfordsville District



Greenfield District

Seymour District

Vincennes District

Exhibit II: INDOT's Incoming Contacts

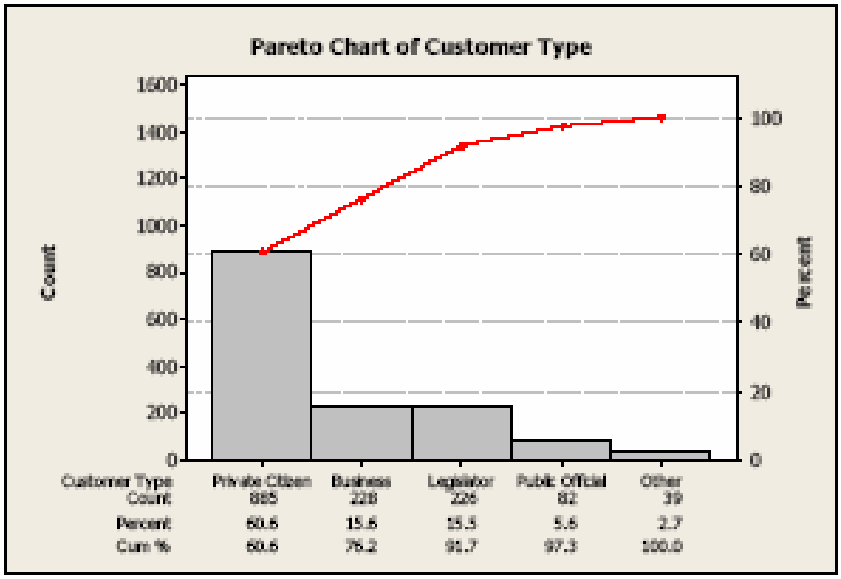


Figure 17: Pareto Chart of rate of contacts by customer type

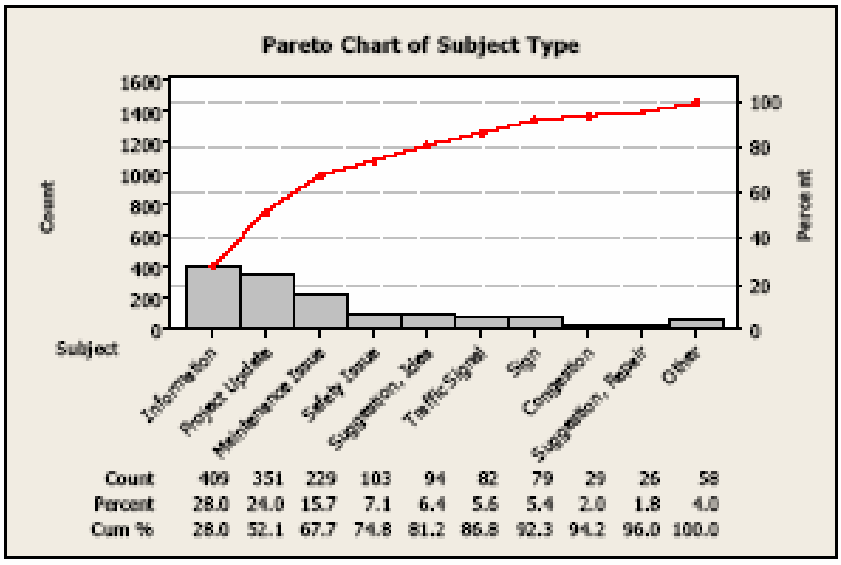
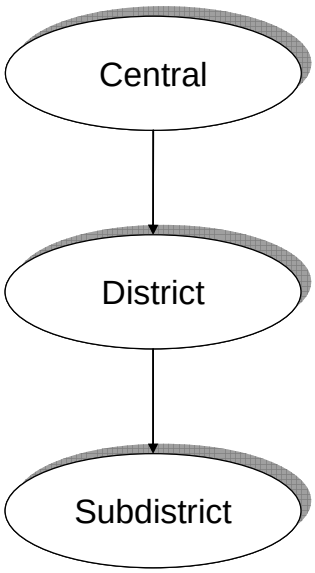
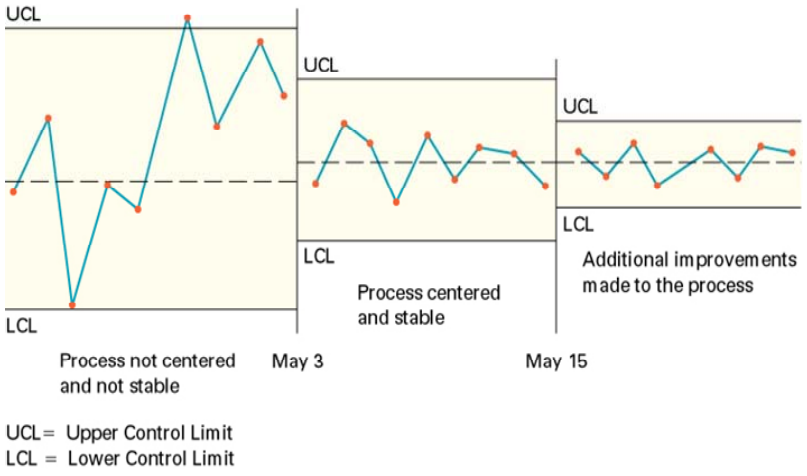


Figure 18: Pareto Chart of rate of contact by subject type

Exhibit III: Process Control Charts





a

INDOT Customer Service

Understanding, linking and measuring customer complaint and satisfaction

Appendices

1. Appendix A

Organizational Structure and Position Descriptions

MAINTENANCE MANAGEMENT SECTION
Central Office

1) Assists the Subdistricts and Districts with planning and balancing the annual Work Management System Work Program and Budget.

2) Provide technical assistance to correct WMS problems and/or answer WMS inquires.

3) Check the WMS Crew Day Card data for accuracy of reporting. Initiate corrections when necessary.

4) Gather WMS data reports periodically and review such data reports for obvious errors or problems.

5) Provide training on the Work Management System as needed.

6) Request software fixes or enhancements to the Work Management System from the software vendor.

7) Create periodic reports concerning maintenance operations for the Executive Staff, District Staff, and Subdistrict Managers.

8) Analyze maintenance procedures and resource requirements for improvements in operations.

SUBDISTRICT MANAGER

Performs a formal semi-annual inspection of the road system with District Operations personnel to plan maintenance needs for the coming period.

1) Regularly inspects the Subdistrict road system to identify maintenance needs and locations.

2) Reviews performance data regularly and provides guidance as needed.

3) Conducts Semi-monthly meetings with the Operations Foreman and Unit Foremen to review and approve the Semi-monthly schedule.

4) Uses the Work Management System's current Work Program and Budget and/or Work Calendar to guide the Subdistrict in its emphasis upon certain activities (especially with regard to Preventive Maintenance activities). May be delegated to the Operations Foreman.

5) Plans all maintenance activity for the upcoming fiscal year on the Work Management System Work Program and Budget function. May be delegated to the Operations Foreman.

6) Submits changes to the Subdistrict's maintenance feature inventory through the District Operations Engineer to the Division of Operations Support /ATTN: Maintenance Management Section.

7) Conducts Quality Assurance (Q.A.) Reviews in accordance with Operating Procedure No. 25*. Quality Assurance Reviews may be delegated to the Operations Foreman.

8) Ensures the safety of the road crews and that the crews are provided with the proper safety training.

9) Forecasts, prepares, and submits requisitions for materials needed to perform maintenance activities.

SUBDISTRICT OPERATIONS FOREMAN

1) Prepares the **Semi-Monthly schedule (FORM MM-329)** together with the Subdistrict Manager and Unit Foremen to identify routine maintenance and maintenance improvement work to be done in the coming half-month.

2) Ensures that Subdistrict maintenance personnel are performing all work as assigned.

3) Regularly inspects the Subdistrict's roadways and facilities to identify maintenance needs and locations.

4) Ensures that the Subdistrict maintenance personnel have proper manpower, equipment, material, and safety devices to efficiently perform the work assigned.

5) Ensures that all work performed conforms to applicable INDOT Operations Procedures, Activity Performance Standards, Quality Assurance Guidelines, and Environmental Restrictions.

6) Ensures the safety of the road crews and that the crews are provided with the proper safety training.

7) Ensures that all work accomplished is reported onto a Maintenance Crew Day Card. Reviews all Crew Day Cards for accuracy and timeliness prior to input into the WMS system.

8) Ensures that the INDOT maintenance crews and equipment present a positive image to the general public at all times.

9) Fills out a **MM-326 (Maintenance Needed Report)** whenever the needs of the roadway warrant documentation of the deficiency.

10) Provides input into the development of the Subdistrict Work Program Plan and Fiscal Year Budget.

11) Ensures that all new personnel are properly trained and certified to perform their assigned tasks.

UNIT FOREMAN

1) Assigns work to unit personnel via the Maintenance Crew Day Card (**Form MM 310**).

2) Ensures that members within his/her unit are performing all work as assigned.

3) Ensures that all work performed conforms to applicable INDOT Operations Procedures, Activity Performance Standards, Quality Assurance Guidelines, and Environmental Restrictions.

4) Ensures the safety of the road crews and that the crews are provided with the proper safety training.

5) Performs Quality Assurance (Q.A.) Reviews in accordance with Operating Procedure No. 25 for the Quality Assurance activities throughout the fiscal year *. Submits the completed reviews to the Subdistrict Manager.

6) Ensures that all work accomplished is reported onto a Maintenance Crew Day Card in a timely and accurate manner. For work reporting details, see page 10.

7) Reviews Crew Day Cards filled out by the Crew Leaders for completeness and accuracy.

8) Ensures that the INDOT maintenance crews and equipment present a positive image to the general public at all times.

9) Reports emergency situations (i.e. severe weather, injuries, accidents, bad road conditions, etc.) immediately to the Subdistrict.

10) Fills out and turns in a MM-326 (Maintenance Needed Report) whenever the needs of the roadway warrant documentation of the deficiency. Reviews all MM-326's that are filled out by subordinates.

11) Inspects all roads in their unit at least once a week for deficiencies.

12) Provides input into the development of the Subdistrict Work Program Plan and Fiscal Year Budget.

MAINTENANCE CREW LEADER

(Note: this section also applies to anyone "acting" as a Crew Leader.)

1) Ensures that members of his/her crew are performing all work as assigned.

2) Ensures that all work performed conforms to applicable INDOT Operations Procedures, Activity Performance Standards, Quality Assurance Guidelines, and Environmental Restrictions.

3) Ensures the safety of the road crews and that the crews are provided with the proper safety training.

4) Ensures that all work accomplished is reported onto a Maintenance Crew Day Card in a timely and accurate manner. For work reporting details, see page 10.

5) Ensures that the INDOT maintenance crews and equipment present a positive image to the general public at all times.

6) Reports emergency situations (i.e. severe weather, injuries, accidents, bad road conditions, etc.) immediately to supervisors.

7) Fills out and turns in a **MM-326** (Maintenance Needed Report) whenever the needs of the roadway warrant documentation of the deficiency.

2. Appendix B: Customer Service Case Specifics

List of Cases at Center Traceable at District:

Case #	Start Date	Close date	Case ID - Customer Name
2	10-May-06	24-May-06	Janet Mikeworth, SR 267
3	22-May-06	22-May-06	Dillman
5	23-Mar-06	4-Apr-06	Reene Poteete
11	27-Apr-06	27-Apr-06	Musselman, SR 32
16	10-May-06	19-May-06	Dicus, SR 39
17	12-May-06	15-May-06	Bayless, blanket bond
19	8-May-06	11-May-06	Frank Walsh, Plainfield
26	8-May-06	11-May-06	Karen Arnold
27	15-May-06	17-May-06	Hutchinson, SR 55
37	24-Apr-06	26-Apr-06	Houck, Harassment
38	3-May-06	4-May-06	3731 Cindy McDonald
39	8-May-06	15-May-06	3864 Sam & Brenda Haslam
40	9-May-06	16-May-06	3927 Melissa Ade
41	19-May-06	26-May-06	4316 Robin Baas

List of Cases at District Not Traceable to Center's Data

Customer Name	**Remark**
Ruth Pleus	Not found in center data
LaRhonda Davis, I-74	Not found in center data
MaDonald, SR 43	Not found in center data
Galbraith, parking barriers	Assignment error (Saymour)
Raynolds, Habart	Not found in center data
Simon, Cloverdale, Greencastle	Not found in center data
Mellisa Ade, SR 267	Not found in center data
Nannette Voorde, Hendricks county	Not found in center data
Van Woerden, St Rd 18	Assignment error (Laporte)
Janet Halsema, CR 500 E	Not found in center data
Michael Shaver, US 421	Assignment error (Greenville)

List of Cases at Center Pertaining to Crawfordsville

ID	first_name	last_name	contact_nature	subject
3301	John	Smith	Complaint	Traffic Signal
3345	Senator Richard	Bray	Comment	Project Update
3350	Kevin	Reese	Question	Information
3351	Margaret	Spors	Complaint	Safety Issue
3357	Robert	Whitmoyer	Question	Project Update
3382	Julie	Musgrave	Complaint	Property
3425	Erwin	Johannes	Request	Project Update
3445	Frankie	Zollars	Request	Maintenance Issue
3448	Matt	Hendrix	Request	Information
3455	John	Reynolds	Suggestion	Speed Limits
3460	Margie		Question	Information
3465	Mike	Weber	Request	Information
3505	Pam	Hubner	Question	Project Update
3578	Bill	Holland	Question	Information
3595	Senator Richard	Bray	Comment	Suggestion
3628	Carl V.	Covely, Jr.	Question	Roadside, Right of Way
3640	Larry	Musselman	Complaint	Congestion
3665	Don	GeHart	Question	Project Update
3710	Jan	Gudauskas	Question	Roadside, Right of Way
3711	Jan	Gudauskas	Compliment	Roadside, Right of Way
3712	Bob	Tullius	Question	Information
3721	Julie	Houck	Complaint	Maintenance Issue
3731	Cindy	McDonald	Question	Maintenance Issue
3761	Melissa	Smith	Question	Information
3763	Tim	Helton	Complaint	Maintenance Issue
3801	Tom	Collins	Request	Information
3864	Sam & Brenda	Haslam	Complaint	Safety Issue
3891	Phil	Burdine	Question	Non INDOT
3921	Bob	Tullius	Question	Information
3927	Melissa	Ade	Question	Project Update
3931	Janet	Johl	Question	Roadside, Right of Way
3939	Chris	Dicus	Request	Traffic Signal
3954	Tim	Dunigan	Request	Sign
3963	Janet	Mikeworth	Complaint	Project Update
3965	Leah	Bischoff	Complaint	Maintenance Issue
3967	Bob	Tullius	Question	Information
3969	Bob	Tullius	Question	Information
3978	Senator Ron	Alting	Complaint	Maintenance Issue
4041	Jim	Catt	Complaint	Safety Issue
4067	Kevin	May	Question	Project Update
4083	Leroy	Boone	Question	Information
4091	Glenn	Bussa	Request	Information
4109	Thelma		Suggestion	Suggestion
4110	Thelma		Suggestion	Suggestion
4120	David	Brazill	Question	Project Update
4126	Sheleatha	Bullock	Complaint	Safety Issue
4174	Carolyn	Bauer	Question	Property
4180	James	Proctor	Complaint	Traffic Signal
4188	Daupert		Complaint	Pothole
4190	Jason	Bayless	Request	Information
4213	Jeff D.	Hutchinson	Complaint	Drainage
4216		Walsh	Question	Project Update

List of Cases at Center Pertaining to Crawfordsville (cont)

ID	first_name	last_name	contact_nature	subject
4227	David	Gordon	Complaint	Maintenance Issue
4230	unknown	user	Complaint	Congestion
4241	David	Williams	Question	Maintenance Issue
4247	Megan	Couch	Complaint	Pothole
4251	Ryan	Bush	Question	Publications
4252	Carin	Kosmoski	Question	Sign
4254	Carol E.	Galey	Question	Project Update
4255	Howard S.	Lewis	Request	Information
4260	Jeff	Snapp	Question	Non INDOT
4268	Judy	Whitaker	Question	Information
4279	Sue	Benson	Complaint	Maintenance Issue
4280	Jamilyn	Bertsch	Request	Non INDOT
4295	Roy	Dillman	Question	Project Update
4300	Tim	Shrout	Request	Traffic Signal
4301	Janet		Complaint	Congestion
4309	Michael	Grizzle	Complaint	Non INDOT
4316	Robin	Baas	Complaint	Pothole
4340	Lee	Wilhite	Question	Project Update

List of Cases at Center Pertaining to Crawfordsville not Traceable in District Data

Case ID - Customer Name

3345 - Senator Richard Bray
3350 - Kevin Reese
3351 - Margaret Spors
3357 - Robert whitmoyer
3382 - Julie Musgrave
3425 - Ervin Johannes
3445 - Frankie Zollars
3448 Matt Hendrix
3460 - Margie
3465 Mike Weber
3505 Pam Hubner
3578 Bill Holland
3595 Richard Bray
3628 Carl Covely
3665 Don GeHart
3710 Jan Gudarauskas
3711 Jan Gudarauskas
3712 Bob Tullius
3761 Melissa Smith
3891 Phil Burdine
3921 Bob Tullius
3931 Janet Johl
3954 Tim Dunigan
3967 Bob Tullius
3969 Bob Tullius

Case ID - Customer Name

3978 Senator Ron Alting
4041 Jim Catt
4067 Kevin May
4083 Leroy Boone
4091 Glenn Bussa
4120 David Brazil
4126 Steleatha Bullock
4174 Calrolyn Bauer
4180 James Proctor
4188 Daupert
4241 David Williams
4247 Megan Couch
4251 Ryan Bush
4252 Carin Kosmoski
4254 Carol Galey
4255 Howard Lewis
4260 Jeff Snapp
4279 Sue Benson
4280 Jamilyn Bertsch
4300 Tim Shrout
4309 Michael Grizzle
4340 Lee Wilhite

SAC Draft Final Report Feedback

(pages following)

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REPLY TO:
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December 7, 2006

Dr. Kumares C. Sinha, Director
The Joint Transportation Research Program
School of Civil Engineering
Purdue University
West Lafayette, IN 47907

Subject: Review Comments for the Draft Final Report, "INDOT Customer Service," SPR-3050, FHWA/IN/JTRP-2006/30

Dear Professor Sinha:

Enclosed are review comments from the Study Advisory Committee members pertaining to the subject draft final report and implementation plan. These comments need to be addressed in the revised final report and implementation plan. A copy of the completed final *INDOT Research Project Implementation Plan Form* should be submitted with the final report.

Please send the appropriate number of copies of the final report (technical report, implementation report, and technical summary) to the agencies listed on pages 34 and 35 of the INDOT *User's Manual for Research and Implementation.* The report, including graphs, tables and figures, in electronic format (preferably *Microsoft Word for Windows*) should be submitted to the INDOT Research Division. If any computer software or video tapes are produced in this study, they should also be submitted to the Research Division and FHWA.

Sincerely,

Barry K. Partridge, Chief
Office of Research & Development

san12070601.doc
Attachments
cc: Scott Newbolds, Research and Development
Barry Partridge, Research and Development
Lyle Sadler, Communications Office
Tommy Nantung, Research and Development
Bob McCullouch, Purdue University
David Unkefer, FHWA

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INTER-DEPARTMENT COMMUNICATION

November 29, 2006

To: Barry K. Partridge, Director
Research and Development

From: Tommy E. Nantung
Section Manager

Subject: Review of the Draft Report for the SP&R Part II Research Study SPR-3050, "INDOT Customer Service" FHWA/IN/JTRP-2006/30

Based on the draft report:

1. Does the report fulfill the study objectives defined in the study proposal? YES.
2. Is the report written for the understanding of the intended user? YES.
3. Does the report support the findings and conclusions offered and do you agree with them? YES.
4. Do you agree with the implementation suggestions? YES.
5. Does the Technical Summary contain the following three required elements: a short introduction of the study's background; a concise summary of the research results; and the highlights of proposed implementation? NO. It tells "what next" for INDOT for not clearly what to implement based on that study.
6. Is the Technical Summary well write and easy to read for the dissemination purposes? YES, but needs updating.
7. Which Division(s)/District(s) and who should be involved in the implementation of the research results? INDOT Executive Staff.
8. Will you be participating in the implementation? NO.
9. Do you recommend having a SAC meeting after revising this draft report to discuss the final version of the report and/or the implementation plan? YES, had been done.

Should you have any questions, please contact me.

TEN11280606

Cc: C-83-1-42

Bob McCullouch **10/12/06**

Review of Draft Final Report for SPR-3050, "INDOT Customer Service"

Below are my review comments.

General comments

There are parts that are poorly written. A marked up copy is provided showing these areas.

Specific Comments

1. Does the report fulfill the study objectives? Yes.
2. Is the report written for the understanding of the intended user? This can be improved by being more specific and descriptive in describing how to implement the findings.
3. Does the report support the findings and conclusions offered and do I agree with them? Yes.
4. Do you agree with the Implementation suggestions? Yes but be more descriptive in describing how to implement the BSC tool. Also, some info on automated customer support systems that are commercially available is needed.
5. Does the Technical Summary contain the three required elements? Yes it does. Since BSC is the recommended tool it should be described here. Also, more specific Implementation recommendations needs to be included.
6. Is the Technical Summary well written and easy to read for dissemination purposes? Yes.
7. Which Divisions/Districts should be involved in the Implementation? All Districts and the Central Office/ Operations Support Division.
8. Will You be participating in the Implementation? No.
9. Does the Implementation plan meet INDOT needs and is the suggested Implementation feasible? Other recommendations made in the report besides the BSC needs to be described in the Implementation plan.

Newbolds, Scott

From: Unkefer, David [David.Unkefer@fhwa.dot.gov]
Sent: Wednesday, October 18, 2006 10:29 AM
To: Partridge, Barry; Newbolds, Scott
Cc: Sadler, Lyle
Subject: Draft reports for SPR-3049 and SPR-3050

Barry/Scott – apologize for lateness in responding on these reports. Kate Quinn was the FHWA SAC representative and has now moved on to our HQ office, so we will not be providing any detailed comments on these reports. We believe the other SAC members will cover the review adequately.

Regarding SPR 3050 "INDOT Customer Service", having worked on this in the past I can recommend two states as possible benchmarks as the implementation continues – Pennsylvania and Florida. Both have done extensive work to define customer segments and develop methods for gaining customer input, including work on information systems which is noted as an implementation item in the draft report. A Florida DOT contact would be Mr. Ken Leuderalbert (850-414-4792, ken.leuderalbert@dot.state.fl.us) and the PennDOT contact would be Jay Bodenstein (717-214-3763, jaybodenstei@state.pa.us)

Take care.

David Unkefer
Engineering Services & Research Team Leader
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